In the claims:

Please substitute the following full listing of claims for the claims as originally filed or most recently amended.

1. (Original) A fiber optic transducer for measuring shear force or flow rate comprising

a floating head,

a reference surface,

a cantilever means extending between said reference surface and said floating head, and

a plurality of integral fiber optic sensors arranged to sense relative motion between said reference surface and said floating head, each said integral fiber optic sensor comprising

a tube,

a fiber optic element having an end within said tube, and

a reflective surface positioned by said tube at a location spaced from said end of said fiber optic element by said tube.

2. (Original) The transducer as recited in claim 1 wherein said plurality of integral fiber optic sensors are symmetrically arranged around said cantilever.

3. (Original) The transducer as recited in claim 2 wherein said plurality of integral fiber optic sensors comprise two integral fiber optic sensors.

4. (Original) The transducer as recited in claim 1 wherein said plurality of integral fiber optic sensors comprise two integral fiber optic sensors.

5. (Original) The transducer as recited in claim 1 wherein some of said plurality of integral fiber optic sensors are bonded to said cantilever means.

6. (Original) The transducer as recited in claim 1 wherein said reflective surface is formed by an end of an optical fiber.

7. (Original) The transducer as recited in claim 1 wherein said end of said optical fiber is substantially flat.

8. (Original) The transducer as recited in claim 1, further including

a housing surrounding said cantilever means and said plurality of integral sensors.

9. (Original) The transducer as recited in claim 8, wherein said housing includes a bellows sealed to said floating head.

10. (Currently Amended) The transducer as recited in claim 9 ~~wherin~~ wherein said bellows further includes a spring.

11. (Original) The transducer as recited in claim 1 wherein said cantilever means is formed of an alloy.

12. (Original) The transducer as recited in claim 1 wherein at least two of said integral sensors are matched for responses to temperature and pressure.

13. (Original) The transducer as recited in claim 1 wherein at least two of said plurality of integral sensors are substantially insensitive to temperature variation.

14. (Original) The transducer as recited in claim 1 wherein an integral sensor of said plurality of integral sensors includes a plurality of gaps.

15. (Original) A flow rate or shear force telemetry system including

a fiber optic transducer for measuring shear force or flow rate comprising

a floating head,

a reference surface,

a cantilever means extending between said reference surface and said floating head, and

a plurality of integral fiber optic sensors arranged to sense relative motion between said reference surface and said floating head, each said integral fiber optic sensor comprising

a tube,

a fiber optic element having an end within said tube, and

a reflective surface positioned by said tube at a location spaced from said end of said fiber optic element by said tube, and

signal processing means including common mode signal rejection processing.